

The transmission system according to the invention comprises a transmitter (10) and a receiver (12). The transmitter (10) can transmit datawords via a multicarrier signal (11) to the receiver (12). In order to reduce the crest factor of this multicarrier signal (11) the transmitter (10) comprises a generator (20) and a selector (22). The generator (20) generates for each dataword (19) a number of alternative sequences (21) by combining mutually different digital words with the dataword (19). For this purpose, the generator (20) may comprise an augmentor (40) and a scrambler (42). The augmentor (40) generates for each dataword (19) a number of intermediate sequences (41) by combining the digital words with the dataword (19). These intermediate sequences (41) are scrambled by the scrambler (42) in order to form the alternative sequences (21). From these alternative sequences (21) the alternative sequence with the lowest peak power value (23) is selected for transmission to the receiver (12).